Title of Instructional Materials: Prentice-Hall Course 3

Grade Level: Grade 8

Summary of Prentice-Hall Course 3

Overall Rating:	Weak (1-2)Moderate (2-3)Strong (3-4)	Important Mathematical Ideas:	✓ Weak (1-2)✓ Moderate (2-3)✓ Strong (3-4)
Summary / Justification / Evidence: This textbook has a lot of the Common Core standards left out. It doesn't include systems of equations, triangle sum theorem (not clear at all), distance formula, functions without function notation. The standards that are available are poorly developed with little meaningful practice or real-world applications. Again a Common Core toolkit is referenced, but it isn't available for evaluation. This textbook is strongly discouraged for adoption.		Summary / Justification / Eviden	nce:
Skills and Procedures:	Weak (1-2)Moderate (2-3)Strong (3-4)	Mathematical Relationships:	Weak (1-2)Moderate (2-3)Strong (3-4)
Summary / Justification / Evider	ıce:	Summary / Justification / Evider	nce:



Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Durad Rating 1/2

Grade 8



a project of

The Charles A. Dana Center at the University of Texas at Austin

Instructional Materials Analysis and Selection

Phase 3:

Assessing Content Alignment to the Common Core State Standards for Mathematics

A project of:
The Indiana Education Roundtable, The Indiana Department of Education,

The Charles A. Dana Center at The University of Texas at Austin

2010-2011

Instructional Materials Analysis and Selection Assessing Content Alignment to the Common Core State Standards for Mathematics

This tool provides educators with a structured way to make informed decisions when selecting mathematics instructional materials. In particular, it can help you become more knowledgeable about the Common Core State Standards for Mathematics so you can select instructional materials aligned with these standards.

This resource can also be used with the Dana Center's larger 4-phase Instructional Materials Analysis and Selection toolset: Phase 1: Studying the Standards, Phase 2: Narrowing the Field of Instructional Materials, Phase 3: Assessing Subject-Area Content Alignment, and Phase 4: Assessing Vertical Alignment of Instructional Materials. The particular resource you hold is a phase 3 tool that has been customized for assessing the alignment of instructional materials with the Common Core State Standards for Mathematics. Note that in 2009, the Dana Center developed a similar tool for Indiana educators to use in analyzing the alignment of instructional materials to Indiana's Academic Standards for Mathematics.

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About the development of this resource

This tool, Instructional Materials Analysis and Selection: Assessing Content Alignment to the Common Core State Standards for Mathematics, draws on the Dana Center's nearly 20 years of experience in strengthening education and has been used extensively in Texas and, increasingly, other states, to help local school districts and schools select instructional materials aligned with their standards. Development and production of the Instructional Materials Analysis toolset was supported by the Charles A. Dana Center.

This resource consists of a set of 15 individual grade-level / course documents that span kindergarten through the third year of high school mathematics. There is a document for each grade from kindergarten through 8, and six documents for high school mathematics (one each for the three courses in the traditional high school pathway Algebra I, Geometry, Algebra II; and one each for the three courses in the integrated high school pathway Mathematics I, Mathematics II, and Mathematics III).* At the request of various states and other entities, the Dana Center has populated this *Instructional Materials Analysis and Selection* tool with standards from the *Common Core State Standards for Mathematics* for use by local districts in selecting instructional materials aligned with these standards.

Note that the copyright of the Common Core State Standards for Mathematics is held by the National Governors Association Center for Best Practices and the Council of Chief State School Officers (collectively, NGA Center/CCSSO). This use of the CCSS for Mathematics is done under the CCSS Terms of Use, available at www.corestandards.org/terms-of-use. Specifically, this work is done under the Terms of Use "non-exclusive, royalty-free license to copy, publish, distribute, and display the Common Core State Standards for non-commercial purposes that support the Common Core State Standards Initiative." For a complete copy of the Common Core State Standards for Mathematics as well as the CCSS for Mathematics, Appendix A: Designing high school mathematics courses based on the Common Core State Standards, go to www.corestandards.org/the-standards.

October 2010 release.

We welcome your comments and suggestions for improvements—please send to dana-txshop@utlists.utexas.edu or the address in the copyright section above.

About the Charles A. Dana Center at The University of Texas at Austin

The Dana Center works to raise student achievement in K-16 mathematics and science, especially for historically underserved populations. We do so by providing direct service to school districts and institutions of higher education; to local, state, and national education leaders; and to agencies, nonprofits, and professional organizations concerned with strengthening American education.

The Center was founded in 1991 at The University of Texas at Austin. We carry out our work by supporting high standards and building system capacity; collaborating with key state and national organizations to address emerging issues; creating and delivering professional supports for educators and education leaders; and writing and publishing education resources, including student supports. Our staff of more than 60 has worked with dozens of school systems in nearly 20 states and with 90 percent of Texas's more than 1,000 school districts. We are committed to ensuring that the accident of where a child attends school does not limit the academic opportunities he or she can pursue.

For more information about our programs and resources, see our homepage at www.utdanacenter.org. To access our resources (many of them free), see our products index at www.utdanacenter.org/products. And to learn more about our professional development—and sign up online—go to www.utdanacenter.org/pd.

^{*} For the high school course sequences, we relied on the Common Core State Standards Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards, developed for the CCSS initiative by Achieve, Inc., which convened and managed the Achieve Pathways Group.

Acknowledgments

Unless otherwise noted, all staff listed here are affiliated with the Dana Center.

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Our thanks

We gratefully acknowledge the more than 100 school districts and thousands of educators who have informed the development of these resources.

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The Charles A. Dana Center

Introduction

Phase 1: Studying the Standards

Phase 2: Narrowing the Field of Instructional Materials

Phase 3: Assessing Mathematical Content Alignment

The purpose of Phase 3: Assessing Mathematical Content Alignment is to determine the degree to which the materials are aligned to the standards (content and processes). In Phase 3, participants conduct an in-depth review of the 2-3 instructional materials selected in Phase 2. The Phase 3 process requires selection committee members to use set criteria in order to determine a rating for each sample, to cite examples to justify their score for each sample, and to document standards that are missing or not well-developed in the instructional materials examined.

Implementation

As a whole group, selection committee members should practice applying the Phase 3 rubric. The purpose of the whole group practice is to promote inter-rater reliability and calibration.

In Phase 3 it is not important to analyze every page, section, or chapter of a resource. It is important to identify an area, topic, or big idea for the deep content analysis of Phase 3 (e.g. development of equivalent fractions, addition of whole numbers, development of proportionality...). The identified area, topic, or big idea will be used for all the instructional materials considered in Phase 3. The area, topic, or big idea can be identified through the use of student achievement data, curriculum priorities/challenges, or ideas that typically make up a greater portion of instruction in particular grade levels/courses. In most cases, Phase 3 will identify the one resource that is best aligned.

Step-by-Step Instructions

- 1. Use your current adoption to practice using the Phase 3 rubric. Select one big idea to focus your analysis (see note above for selecting the area, topic, or big idea).
- 2. Independently, committee members use their current resource, the identified big idea (and associated pages in that resource), and the Phase 3 rubric to score and document the extent to which the material (content and processes) aligns to the standards.
- 3. In small groups, committee members share their scoring and justifications. Small groups come to consensus on how the current resource would score on this big idea.
- 4. Each small group shares with the large group their score. Repeat the consensus building to generate a large group score on this big idea.
- 5. Clarify any misunderstandings about how to apply the rubric before committee members begin to use Phase 3 rubric on the selected materials.

- 6. Based on the size of the selection committee, determine the number of areas, topics, or big ideas to be examined for each grade/course.

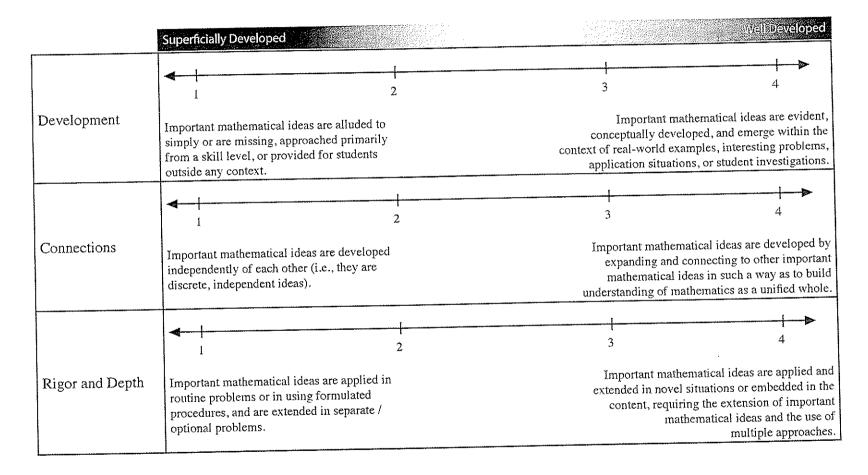
 If the group size is large, more areas, topics, big ideas can be examined within each grade level/course.
- 7. Make sure committee members have multiple copies of the Phase 3 rubric.
- 8. Committee members apply the Phase 3 rubric for each of the materials.
- 9. Establish a time line for groups to complete and submit Phase 3 documentation.
- 10. Establish a data collection and analysis process to attain a rating for each resource.

Materials and Supplies

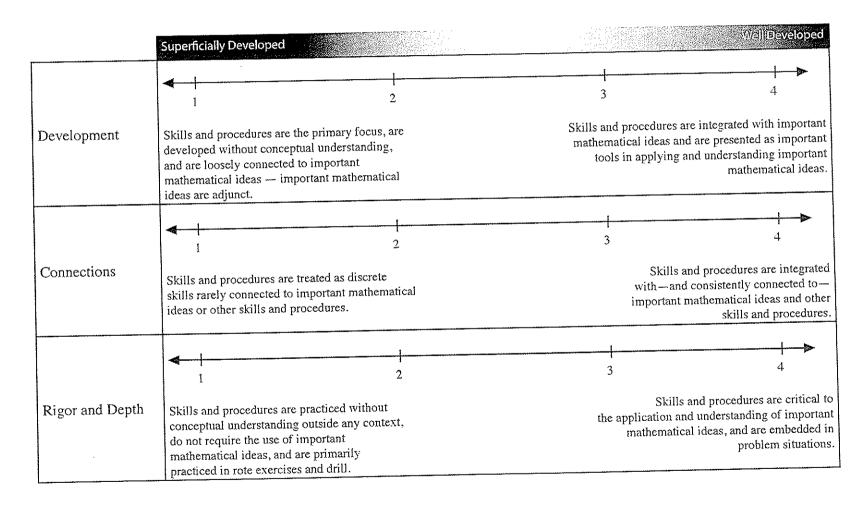
- Phase 3: Assessing Mathematical Content Alignment black line master multiple copies per person
- Currently used instructional resource
- The 2 to 4 instructional materials selected in Phase 2

Phase 4: Assessing Vertical Alignment of Instructional Materials

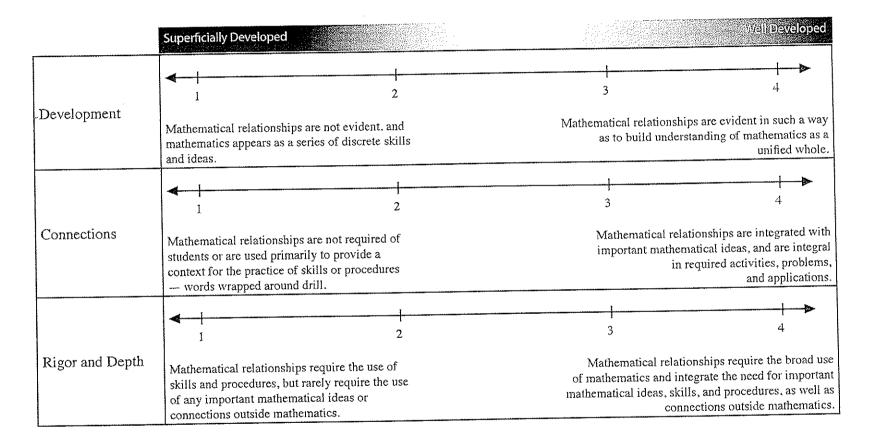
Important Mathematical Ideas: Understanding the scoring



Skills and Procedures: Understanding the scoring



Mathematical Relationships: Understanding the scoring



Reviewed By:	
Title of Instructional Materials	:

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

1 2 3 4

Reviewed By:	
Title of Instructional Materials:	

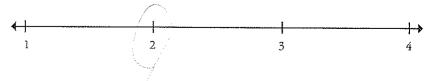
2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in-problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), section(s), or page(s) reviewed.

Summary/Justification/Evidence

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:		
Title of Instructional Material	s:	

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

0.30,39 42,54,69, 744,95, 110, = 100 100,148,176-177, 217,286,205,263 Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Reviewed By:	
Title of Instructional Materials:	

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

O T S O

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence



Reviewed By:	
Title of Instructional Materials:	

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), section(s), or page(s) reviewed.

1.30,39,41,74-75,85,90,132.13 176-177, 18, 308,204,225,

Summary/Justification/Evidence

Ros Sovere

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

O. Attenu to precision.	6. Attend	to	precision.
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Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Indicate the chapter(s), section(s), or page(s) reviewed.

Summary/Justification/Evidence

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Tours 1



]	Reviewed By:	
,	Title of Instructional Materials:	

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1,2) with slope 3, middle school students might abstract the equation (y-2)/(x-1) = 3. Noticing the regularity in the way terms cancel when expanding (x-1)(x+1), $(x-1)(x^2+x+1)$, and $(x-1)(x^3+x^2+x+1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

6.16,17, 33, 63, 82, 107, 163, 188 211,220,261, 292,304, 325, 359, 389, 413 2/6,

Summary/Justification/Evidence

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - THE NUMBER SYSTEM - 8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.	Summary and documentation met. Cite examples from the	on of how material	the domain, clus s.	ter, and stand	lard are
8.NS.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal	Important Mathematical Ideas	1	2	3	4
expansion which repeats eventually into a rational number.	Skills and Procedures		2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed. $2-2+3-1$	Mathematical Relationships	1	2	3	 →
	Summary / Justification / E	vidence			
	Portions of the domain, cludeveloped in the instruction	nal mater	ials (if any):		ot well
	Overall Rating	 		3	4

Reviewed By:		
Title of Instructional Material	S:	

MATHEMATICS: GRADE 8 - THE NUMBER SYSTEM - 8.NS

Summary and documentation of how the domain, cluster, and standard are Know that there are numbers that are not rational, and approximate met. Cite examples from the materials. them by rational numbers. 8.NS.2 Important Mathematical Ideas Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations. Skills and Procedures Mathematical Relationships Summary / Justification / Evidence Basic Def. of irrad, #'s found in 3-1 Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Work with radicals and integer exponents.	Summary and documentation of how the domain, cluster, and standard met. Cite examples from the materials.	d are
8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.	Important Mathematical Ideas 1 2 3	 → 4
	Skills and Procedures 1 2 3	 → 4
	Mathematical Relationships 1 2 3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence	
9-3-12-3-12-3	Portions of the domain, cluster, and standard that are missing or not developed in the instructional materials (if any):	well
	Overall Rating 1 2 3	

Reviewed By:	
Title of Instructional Materials:	

Work with radicals and integer exponents.	Summary and documentation met. Cite examples from the			ter, and stand	iard are
8.EE.2 Use square root and cube root symbols to represent solutions to equations	Important Mathematical Ideas	4	2		→
of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.		•	L	,	1
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	(→
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E		ju 34		
3-1,00-1	Portions of the domain, clu developed in the instructio			missing or n	ot well
	Overall Rating			3	— →

Reviewed By:	
Title of Instructional Materials:	

Work with radicals and integer exponents.	Summary and documentation met. Cite examples from the	on of how th e materials.	e domain, c	luster, and stand	lard are
8.EE.3					
Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3×10^9 and the population of the world as 7×10^9 , and determine that the world population is more than 20 times larger.	Important Mathematical Ideas	1	2	3/	4
	Skills and Procedures	1	2	3	
	Mathematical Relationships	← 1	 2	3	 → 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E	ster, and sta		are missing or no	ot well
	,	and the second s			
	Overall Rating		1 2	1 3	→ 4

The Charles A. Dana Center

18

Reviewed By:		
Title of Instructional Materials	:	

Summary and documentation of how the domain, cluster, and standard are Work with radicals and integer exponents. met. Cite examples from the materials. 8.EE.4 Important Mathematical Ideas Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by Skills and Procedures technology. 213-> p.96#7 Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. 2-8,2-86,12-Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Understand the connections between proportional relationships, lines, and linear equations.	Summary and documentati met. Cite examples from th			cluster, and stan	dard are
8.EE.5	Important Mathematical Ideas			·	
Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	-	[->
		1,	2	3	4
	Mathematical Relationships	4			
		1/	2	3	4
	Summary / Justification / E	Evidence	,	4.0	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Stardord	14. 23.	r16f	well -	£ ;
	Portions of the domain, cli developed in the instruction			are missing or r	not well
	Overall Rating	1	2		→ 4

Reviewed By:	-
Title of Instructional Materials:	

Understand the connections between proportional relationships, lines and linear equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.EE.6 Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for	
a line intercepting the vertical axis at b.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation met. Cite examples from the		e domain, clus	ter, and stan	dard are
8.EE.7a 7. Solve linear equations in one-variable. Olive and the first are sweetless in one variable with one solution.	Important Mathematical Ideas	1	1 2	3	4
a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).	Skills and Procedures	1	2	3	——— →
	Mathematical Relationships	1	2	3	 →
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E	vidence	54 G2		
6-1,6-3,6-4, CC-4	Portions of the domain, cludeveloped in the instruction			missing or n	ot well
	Overall Rating	41			>

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation met. Cite examples from the		ne domain, cl	uster, and stand	ard are
 8.EE.7b 7. Solve linear equations in one variable. b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms. 	Important Mathematical Ideas	1	2	3)	4
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed. $(6-1)_{7} (6-3)_{8} (6-4)_{9}$	Summary / Justification / Every portions of the domain, cludeveloped in the instruction	ster, and st		re missing or no	t well
	Overall Rating		<u> </u>		

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Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
 8. Analyze and solve pairs of simultaneous linear equations. a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. 	Important Mathematical Ideas 1 2 3 4 Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 1 2 3 4

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24

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documental met. Cite examples from the		e domain, clus	ster, and stan	dard are
 8.EE.8b 8. Analyze and solve pairs of simultaneous linear equations. b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6. 	Important Mathematical Ideas Skills and Procedures		2	3	4
	Mathematical Relationships Summary / Justification / I	1)	2	3	→ + 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cli	uster, and sta		missing or n	ot well
	Overall Rating		2	3	—— → 4

The Charles A. Dana Center

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentati met. Cite examples from the		e domain, clus	ter, and stan	dard are
8. EE.8c 8. Analyze and solve pairs of simultaneous linear equations. c. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.	Important Mathematical Ideas Skills and Procedures		2	3	4
	Mathematical Relationships Summary / Justification / E	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2	3 3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cludeveloped in the instruction	uster, and sta onal materials		missing or n	ot well
	Overall Rating	(1)	2	3	

26

Reviewed By:

Title of Instructional Materials:

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

Define, evaluate, and compare functions.

8.F.1

Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.¹

1 Function notation is not required in Grade 8.

Indicate the chapter(s), section(s), and/or page(s) reviewed.

11-3,11-5

Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.

Important Mathematical Ideas



Skills and Procedures



Mathematical Relationships

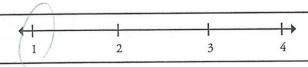


Summary / Justification / Evidence

First part of

Standard

Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and	Important Mathematical Ideas 1 2 3 4
a linear function represented by an algebraic expression, determine which function has the greater rate of change.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	
11-6,00-13	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By:	
•	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

Define, evaluate, and compare functions.	Summary and documentation met. Cite examples from the		e domain, cl	uster, and standa	ard are
8.F.3 Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example,	Important Mathematical Ideas	 	2	3	4
the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.	Skills and Procedures	 	2	3	4
	Mathematical Relationships	1	2	/3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Ev	vidence			
11-5,11-7	Portions of the domain, cluded developed in the instruction			re missing or not	t well
	Overall Rating	4 [1	2	1 3	4

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

Use functions to model relationships between quantities.	Summary and documentation met. Cite examples from the		domain, cl	uster, and stand	ard are
8.F.4		 .			
	Important Mathematical Ideas	1	2	3	4
a linear function in terms of the situation it models, and in terms of its graph	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	1 3	 → 4
	Portions of the domain, cludeveloped in the instruction	ster, and star	ndard that a (if any):	re missing or no	t well
	Overall Rating	1	2	3	- → 4

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

Use functions to model relationships between quantities.	Summary and documentation met. Cite examples from the	on of how e material	the domain, clustes.	er, and stand	dard are
8.F.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	Important Mathematical Ideas	(1	1 2	3	4
\ \	Skills and Procedures	1	2	3	4
	Mathematical Relationships	(2/	3	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Ex				
11-2,11-6	Portions of the domain, cludeveloped in the instruction	ster, and a	standard that are males (if any):	issing or no	ot well
	Overall Rating	←	7 2	3	4

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31

Reviewed By:			
Title of Instructional Materials:			

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
Verify experimentally the properties of rotations, reflections, and translations:	Important Mathematical Ideas 1 2 3 4
Lines are taken to lines, and line segments to line segments of the same length.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence Only pts + Shapes found
3-6,3-7, 3-8, 66-5	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Reviewed By:		 	 	
Title of Instructional Materials:				

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.					
8.G.1b 1. Verify experimentally the properties of rotations, reflections, and translations:	Important Mathematical Ideas		2	3		
b. Angles are taken to angles of the same measure.	Skills and Procedures		2	3	4	
	Mathematical Relationships			3	4	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E			· 3777	>	
3-6, 3-7, 3-8, 00-5	Portions of the domain, clu developed in the instructio			e missing or no	ot well	
	Overall Rating	1	2	3	 → 4	

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.				
8.G.1c1. Verify experimentally the properties of rotations, reflections, and translations:c. Parallel lines are taken to parallel lines.	Important Mathematical Ideas		2	3	 →
C. Parallel liftes are taken to parallel liftes.	Skills and Procedures	<u>← I</u>	2	3	 →
	Mathematical Relationships		2	3	——— →
	Summary / Justification / E	Evidence	opes :	N DUNG	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cludeveloped in the instruction	uster, and sta	ndard that are		
	Overall Rating	(1)	2		

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Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation met. Cite examples from the		domain, clus	ter, and standa	rd are
8.G.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that	Important Mathematical Ideas	1	2	3	 → 4
exhibits the congruence between them.	Skills and Procedures	1	2	3	 → 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Mathematical Relationships	1	2	3	4
	Summary / Justification / En	vidence 3-40	2.74	3 - 8	
	Portions of the domain, clu developed in the instruction			missing or not	well
	Overall Rating	1	1 2	1 3	— → 4

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation met. Cite examples from the	on of how the materials.	domain, c	luster, and standa	rd are
8.G.3	F	_			
Describe the effect of dilations, translations, rotations, and reflections on two- dimensional figures using coordinates.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	↓ 1	2	3	 → 4
	Mathematical Relationships	1	2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E				
3-6,3-7,3-8,4-5	Portions of the domain, clu developed in the instruction			re missing or not	well
		and the second s			
	Overall Rating	← 1	2	1 3	 →

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36

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.G.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence
4-4,4-5,00-3	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	O H. D K.
	Overall Rating 1 2 3 4

Reviewed By:	
Title of Instructional Materials:	

Summary and documentation of how the domain, cluster, and standard are Understand congruence and similarity using physical models, transparencies, or geometry software. met. Cite examples from the materials. 8.G.5 Important Mathematical Ideas Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of Skills and Procedures transversals why this is so. 3 Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. 44,7-2,7-50,CC-3 & Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Important Mathematical Ideas					
	1	2	3	4	
Skills and Procedures	1	2	3	 → 4	
Mathematical Relationships	1	 	3	 → 4	
Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not well					
Overall Rating	nai materials	s (ir any):			
	Mathematical Relationships Summary / Justification / E Portions of the domain, cludeveloped in the instruction	Mathematical Relationships 1 Summary / Justification / Evidence Portions of the domain, cluster, and stadeveloped in the instructional materials	Mathematical Relationships 1	Mathematical Relationships 1 2 3 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or no developed in the instructional materials (if any):	

Title of Instructional Materials:	
i life of mistructional iviaterials.	

Understand and apply the Pythagorean Theorem.	Summary and documentation met. Cite examples from the			uster, and standa	ard are
8.G.7	Important Mathematical Ideas	. I	ŀ	1/	
Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	important mainematical sueas	1	2	3	4
	Skills and Procedures		1		
		i	2	3	4
	Mathematical Relationships	(→
		1	2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	For 193				
3-3, CC-6	Portions of the domain, clu developed in the instruction			re missing or no	t well
	Overall Rating				→
		1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

Understand and apply the Pythagorean Theorem.	Summary and documentation met. Cite examples from the	on of how the materials.	e domain, clu	uster, and standa	ard are
8.G.8	Important Mathematical Ideas	. 1	1	~ 1	1.
Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	important Mainematical Ideas	1	2	3	4
	Skills and Procedures	{ 			
		1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / E		£ .		
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
3-4	Portions of the domain, clu developed in the instruction	ster, and stand stand material	andard that a s (if any):	re missing or no	t well
·		man and a second of the			
	Overall Rating		2	3	

Reviewed By:	

Title of Instructional Materials:

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.					
8.G.9					****	
Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Important Mathematical Ideas	1	2	3	4	
S	Skills and Procedures	1	2	3	 → 4	
	Mathematical Relationships	(- 2	3		
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence					
	Portions of the domain, clus developed in the instruction	ster, and sta	indard that a s (if any):	re missing or no	t well	
	general graphs and a second graph and a second grap	Angel of the				
	Overall Rating	1	2	1 3	—————————————————————————————————————	

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentationet. Cite examples from the		e domain, clus	ter, and stand	ard are
8.SP.1	Important Mathematical Ideas		1	š	, ,
Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	Important Mathematica (ueas	1	2	3	4
	Skills and Procedures				
		1	2	3	4
	Mathematical Relationships	4			 ->
		1	2	3	4
	Summary / Justification / E	vidence	.*	1	*5,
	Summary / Justification / E	and Alexander			A Section
Indicate the chapter(s), section(s), and/or page(s) reviewed.		- 7		and the second second	
9-7,9-7a, CC-7	Portions of the domain, clu developed in the instructio			missing or no	t well
	Overall Rating	(1)	2	3	 → 4

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentation of how the domain, cluster, and standard ar met. Cite examples from the materials.	'e
8.SP.2	Important Mathematical Ideas	 →
Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.	1 2 3	í
	Skills and Procedures 1 2 3	→ 4
	Mathematical Relationships 1 2 3	├ → 4
	Summary / Justification / Evidence	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	· · · · · · · · · · · · · · · · · · ·	
9-7, 66-8	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):	I
	Overall Rating	→

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentation met. Cite examples from the	on of how the materials.	ne domain, clus	ter, and stand	lard are
8.SP.3	Important Mathematical Ideas	(<u> </u>	
Use the equation of a linear model to solve problems in the context of pivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.		1)	2	3	4
	Skills and Procedures		2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
CC-8	Portions of the domain, cludeveloped in the instruction	uster, and st onal material	andard that are	missing or n	ot well
	No fou	nd			
	Overall Rating	√ 1 1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentat met. Cite examples from the		e domain, clus	ster, and stand	ard are
8.SP.4	Important Mathematical Ideas	/."\			
Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data	important Mathematical ideas		2	3	4
on two categorical variables collected from the same subjects. Use relative	Skills and Procedures	4-1			 -)
class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?		1/	2	3	4
nave a currew also tend to have thores?	Mathematical Relationships	(1			
		1	2	3	4
	Summary / Justification / E	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	1 10 50,00000 1				
	Portions of the domain, cli developed in the instruction			missing or not	t well
	Not Su	nd			
	Overall Rating				
	Overall Rating	\ \ \ \ \ \ \ \ \ \ \ \ \ \	2.	2	→

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Pearson Education Inc., Publishing as Prentice Hall Grade 8

Prentice Hall MATHEMATICS Course 3, IN Ed. W/CC Update



	MATHEMATICAL PRACTICES	Chapter/Section/Pag		· ·		Justification/Evi dence	of Math Practice	Overall Rating
	1. Make sense of problems and persevere in solving them.	Yes, as explained in R	eviewers' Gu	uide	1	Promised but not enough time to prove it.Many		A
	2. Reason abstractly and quantitatively.	Yes, as explained in R	eviewers' Gı	uide				4)
	3. Construct viable arguments and critique the reasoning of others.	Yes, as explained in R	eviewers' Gı	uide		examples were given in the Reviewers Guide and with more time, these could be verified. They did not standout and would have to be reinterpreted.		4
	4. Model with mathematics.	Yes, as explained in R	eviewers' Gı	uide				4)
	5. Use appropriate tools strategically.	Yes, as explained in R	eviewers' Gı	uide				4
	6. Attend to precision.	Yes, as explained in R						4
	7. Look for and make use of structure.	Yes, as explained in R						A
	8. Look for and express regularity in repeated reasoning.	Yes, as explained in R	eviewers' G	uide				4
8.NS	THE NUMBER SYSTEM	Chapter/Section/Pag	Important Math Ideas	Skills and Procedures	Math Relationsh ips	Summary/ Justification/Evi dence	Missing portions of Standards	Overall Rating
	Know that there are numbers that are not rational, and approximate them by rational numbers.							
8.NS.1	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeates eventually, and convert a decimal expansion which repeats eventually into a rational number.	Yes, as listed in the CCSS Correlations Chart						
8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions	Yes, as listed in the CCSS Correlations Chart						
8.EE	EXPRESSIONS AND EQUATIONS							
	Work with radicals and integer exponents.							
8.EE.1	Know and apply the properties of integer exponents to generate equivalent numberical expressions.	Yes, as listed in the CCSS Correlations						
8.EE.2	Use square root and cube root symbols to represent solutions to equations of the form x^2 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that square root of 2 is irrational.	Yes, as listed in the CCSS Correlations Chart						

Prenticde Hall MATHEMATICS Course 3, IN Ed. W/CC Update

8.EE.3	Use numbers expressed in the form of a single digit times an integer	Yes, as listed in the				
	power of 10 to estimate very large or very small quantities, and to	CCSS Correlations				
	express how many times as much one is than the other.	Chart				
8.EE.4	Perform operations with numbers expressed in scientific notation,	Yes, as listed in the		***************************************		
	including problems where both decimal and scientific notation are	CCSS Correlations				
	used. Use scientific notation and choose units of appropriate size for	Chart				****
	measurements of very large or very small quantities. Interpret					
	scientific notation that has been generated by technology	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
	Understand the connections between proportional relationships,					
	lines, and linear equations.	· ·				
8.EE.5	Graph proportional relationships, interpreting the unit rate as the	Yes, as listed in the				
	slope of the graph. Compare two different proportional relationships	CCSS Correlations				
	represented in different ways. Ex: compare a distance-time graph to a	Chart				
	distance-time equations to determine which of two moving objects has greater speed.					
8.EE.6	Use similar triangles to explain why the slope <i>m</i> is the same between	Yes, as listed in the		 *****************		1
	any two distinct points on a non-vertical line in the coordinate plane;	CCSS Correlations				
	derive the equation $y=mx$ for a line through the origin and the	Chart				
	equation $v=mx+b$ for a line intercepting the vertical axis at b .	Citare				
	Analyze and solve linear equations and pairs of simultaneous linear	· · · · · · · · · · · · · · · · · · ·				
Ì	equations.					
8.EE.7a	Solve linear equations in one variable.	Yes, as listed in the	20 M 10 M 20 M 20 M 20 M 20 M 20 M 20 M			
	A. Give examples of linear equations in one variable with one	CCSS Correlations				
	solution, infinitely many solutions, or no solutions. Show which of	Chart				
	these possibilities is the case by successively transforming the given					
	equation into simpler forms, until an equivalent equation of the form					
	v = a = a or a = h results (where a and he are different numbers)					
8.EE.7b	Solve linear equations in one variable.	Yes, as listed in the				
	B. Solve linear equations with rational number coefficients, including	CCSS Correlations				
	equations whose solutions require expanding expressions using the	Chart				
	distributive property and collecting like terms.					
8.EE.8a	Analyze and solve pairs of simultaneous linear equations.	Yes, as listed in the				
	A. Understand that solutions to a system of two linear equations in	CCSS Correlations				
	two variables correspond to points of intersection of their graphs,	Chart				
8.EE.8b	because points of intersection satisfy both equations simultaneously. Analyze and solve pairs of simultaneous linear equations.	Yes, as listed in the			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	B. Solve systems of two linear equations in two variables	CCSS Correlations				
	algebraically, and estimate solutions by graphing the equations.	Chart				
	Solve simple cases by inspection. Ex: $3x + 2y = 5$ and $3x + 2y = 6$ have					
	no solution because 3x + 26 cannot simultaneously be 5 and 6					

Prenticde Hall MATHEMATICS Course 3, IN Ed. W/CC Update

8.EE.8c	Analyze and solve pairs of simultaneous linear equations.	Yes, as listed in the	
	C. Solve real-world and mathematical problems leading to two linear	CCSS Correlations	
	equations in two variables. Ex: Given coordiantes for two pairs of points,	Chart	
	determine whether the line through the first pair of points intersects the line through	Chart	
	the second pair.		
	FUNCTIONS		
	Define, evaluate, and compare functions.		
8.F.1	Understand that a function is a rule that assigns to each input exactly	11.3	
	one output. The graph of a function is the set of ordered pairs		
	consisting of an input and the corresponding output. (Note: Function		
1	notation is not required in 8th grade.)		3
			2
8.F.2	Compare properties of two functions each represented in a different	11.6	
	way (aggebraically, graphically, numerically in tables, or by verbal		
	descriptions). Ex: Given a linear function represented by a table of values and a		
	linear function represented by an algebralic expression, determine which function has		2
8.F.3	the areater rate of chanae. Interpret the equation y = mx + b as defining a linear function, whose	11.5	
0.1.5	graph is a straight line; give examples of functions that are not linear.	11.3	
	Ex: The function $A = s^2$ giving the area of a square as a function of its side length is		
	not linear because its graph contains the points (1,1), (2,4) and (3,9) which are not on		
***************************************	a straight line.		
			2
	Use functions to model relationships between quantitites.		
8.F.4	Construct a function to model a linear relationship between two	11.3, Activity Lab	
	quantities. Determine the reate of change and intial value of the	3.5b	
	function from a description of a relationship or from two (x,y) values,		
	including reading these from a table or from a graph. Interpret the		
	rate of change and initial value of a linear function in terms of the		
	situation it models, and in terms of its graph or a table of values.		
			2
8.F.5	Describe qualitatively the functional releationship between two	11.2	
***********	quantities by analyzing a graph (e.g., where the function is increasing		My note: This book was written to cover the 2009
***************************************	or decreasing, linear or nonlinear). Sketch a graph that exhibits the		standards and much of the material in the book will
	qualitative features of a function that has been described verbally.		probably not be mentioned in the Correleation
			Charts. A CC Transition Kit will be available in the
		**************************************	Spring 2011 on the Prentice Hall web site.
	GEOMETRY		
	Understand congruence and similarity using physical models,	HTTERET 4 WORLDWAY (1996) 200 A	
	transparencies, or geometry software.		
<u> </u>	vi villagia, arraidaj de gladinasi y porestura		

Prenticde Hall MATHEMATICS Course 3, IN Ed. W/CC Update

8.G.1a	Verify experimentally the properties of rotations, reflections, and	res, as listed in the		
	translations:	CCSS Correlations		
	a. Lines are taken to lines, and the line segments to line segments of the same length.	Chart		
8.G.1b	Verify experimentally the properties of rotations, reflections, and	Yes, as listed in the		
	translations:	CCSS Correlations		100
	b. Angles are taken to angles of the same measure.	Chart		
8.G.1c	Verify experimentally the properties of rotations, reflections, and	Yes, as listed in the		1
	translations:	CCSS Correlations		To the state of th
	c. Parallel lines are taken to parallel lines.	Chart		
8.G.2	Understand that a two-dimensional figure is congruent to another if	Yes, as listed in the		
	the second can be obtained from the first by a sequence of rotations,	CCSS Correlations		
	reflections, and translations; given two congruent figures, describe a	Chart		
0.00	sequence that exhibits the congruence between them. Describe the effect of dilations, translations, rotations, and	Yes, as listed in the		
8.G.3		CCSS Correlations		
	reflections on two-dimensional figures using coordinates.	Chart		
		Chart		
8.G.4	Understand that a two-dimensional figure is similar to another if the	Yes, as listed in the		
	second can be obtained from the first by a sequence of rotations,	CCSS Correlations		
	reflections, translations, and dilations; given two similar two-	Chart		
	dimensional figures, describe a sequence that exhibits the similarity		1	
	hetween them	Annania Annania (no anti-		
8.G.5	Use informal arguments to establish facts about the angle sum and	Yes, as listed in the		
	exterior angle of triangles, about the angles created when parallel	CCSS Correlations		***
	lines are cut by a transversal, and the angle-angle criterion for	Chart		
	similarity of triangles. Ex: Arragnge three copies of the same triangle so that the			
	sum of the three angles appears to form a line, and give an argument in terms of			
	transversals why this is so.			
	Understand and apply the Pythagorean Theorem.			
8.G.6	Explain a proof of the Pythagorean Theorem and its converse.	Yes, as listed in the		
		CCSS Correlations		
8.G.7	Apply the Pythagorean Theorem to determine unknown side lengths	Yes, as listed in the		
	in right triangles in real-world and mathematical problems in two	CCSS Correlations		
	and three dimensions.	Chart		
8.G.8	Apply the Pythagorean Theorem to find the distance between two	Yes, as listed in the		
	points in a coordinate system.	CCSS Correlations		
		Chart	7 AA AAA AAA AAA AAA AAA AAA AAA AAA AA	
	Solve real-world and mathematical problems involving volume of			
	cylinders, cones, and spheres.			

8.G.9	Know the formulas for the volumes of cones, cylinders, and spheres	Yes, as listed in the			
	and use them to solve real-world and mathematical problems.	CCSS Correlations			
	STATISTICS AND PROBABILITY	Chart	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Investigate patterns of association in bivariate data.	AND COLUMN CORPORATION		 	
8.SP.1	Construct and interpret scatter plots for bivariate measurements	Yes, as listed in the			
	data to investigate patterns of association between two quantities.	CCSS Correlations			
	Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	Chart			, , , , , , , , , , , , , , , , , , , ,
8.SP.2	Know that straight lines are widely used to model relationsips	Yes, as listed in the		 	
	between two quantitative variables. For scatter plots that suggest a	CCSS Correlations			
	linear association, informally fit a straight line, and informally assess	Chart			
	the model fit by judging the closeness of the data points to the line.				
8.SP.3	Use the equation of a linear model to solve problems in the context	Yes, as listed in the			
	of bivariate measurement data, interpreting the slope and intercept.	CCSS Correlations			
	Ex: In a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional	Chart			
	1.5 cm in mature plant height.				

8.SP.4	Understand that patterns of association can also be seen in bivariate	Yes, as listed in the			
	categorical data by displaying frequencies and relative frequencies in	CCSS Correlations			
	a two-way table. Construct and interpret a two-way table	Chart			
	summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or colums				
	to describe possible association between the two variables. Ex: Collect				
	data from students in your class on whether or not they have a curfew on school nights	4 - 111 ¹¹			
	and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?				
	who have a carrew also teha to have choles:				

Instructional Materials **Analysis and Selection**

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Grade 8



instructional Materials Analysis and Selection

Assessing Content Alignment to the Common Core State Standards for Mathematics

Thus tool provides educators with a structured way to make informed decisions when selecting mathematics instructional materials. In particular, it can help you become more knowledgeable about the Common Core State Standards for Mathematics so you can select instructional materials aligned with these standards

This resource can also be used with the Dame Center's larger 4-phase featuresional Materials Analysis and Selection toolset: Phase 1: Studying the Standards, Phase 2: Narrowing the Field of Susructional Mearch, Phase 3: Assume that account constraint companies and september 1: Suspense and Mearch Phase 4: Narrowing the Field of Susructional Mearch, Phase 3: Assuming Suspen-1-ran Constant Migrament, and Phase 4: Assuming Suspense of Instructional Mearch in The particular resource you hold is a phase 3 tool that has been customized for assuming the alignment of instructional materials with the Common Core State Standards for Muthematics. Note that in 2009, the Dana Center developed a similar tool for Indiana educators to use in analyzing the alignment of instructional materials to Indiana's Academic Standards for Mathematics.

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Fax: 512-232-1855 dene-txehop@utlists.usexas.eds

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Assessing Content Alignment to the Common Core State Standards for Mathematics

A project of The Indiana Education Roundtable, The Indiana Department of Education, The Charles A. Dana Center at The University of Texas at Austin

2010-2011

Frontmette

About the development of this resource

This tool, Interactional Momerials Analysis and Selection: Assessing Comment Alignment to the Common Core State Standards for Mathematics, draws on the Dana Center's nearly 20 years of experience in strengthening education and has been used extensively in Texas and, increasingly, other states, to help local achool districts and schools select instructional materials aligned with their standards. Development and production of the Instructional Materials Analysis toolset was supported by the Charles A. Dena Center.

This resource consists of a set of 15 individual grade-level / course documents that span kindergarten through the third year of high school mathematics. There is Jama remonest consists to a set of 12 macrosses genomerors (states consistent case upon genomerors case upon genomerors) and a document for each grade from kindergatent brough S, and six documents for this packool substructive for the three converse in the traditional high achool substructive (see Each grade from kindergatent brough S, and six documents for this packool gasthown for the three converses in the traditional high achool gasthown Machinestics I, Mathematics II, and one each for the three courses in the sategrated high school pathway Mathematics I, Mathematics II, and Mathematics III). At the request of various states and other entities, the Dana Center has populated this Instructional Materials Analysis and Selection tool with mandards from the Common Core State Standards for Mathematics for use by local districts in solecting instructional materials aligned with these standards.

Note that the copyright of the Common Core State Standards for Mashematics is held by the National Governors Association Center for Best Practices and the Council of Chief State School Officers (collectively, NGA Center/CCSSO). This use of the CCSS for Mathematics is done under the CCSS Terms of Use, Council of Cines State School Unicers (coascurvey, AND ACRETICASON). This time of the Terms of the "too-So are reasonable to take the Co-So are represented and copiem of the Specifically, this work is done under the Terms of the "too-schissive, royally-free license to copy, publish, and display the Common Core State Standards for non-commercial purposes that support the Common Core State Standards Initiative." For a complete copy of the Common Core State Standards for Mathematics as well as the CCSS for Mathematics, Appendix A: Designing high achieved mathematics courset based on the Common Core State Standards, go to www.corestandards.org/the-standards.

We welcome your comments and suggestions for improvements—please send to dans-trakep@utlists atexas.eds or the address in the copyright section above.

About the Charles A. Dana Center at The University of Texas at Austin

The Dana Center works to raise student achievement in K-16 mathematics and science, especially for historically underserved populations. We do so by providing direct service to school districts and institutions of higher education; to local, state, and national education leaders; and to agencies, comprofits, and professional organizations concerned with strengthening American education.

The Contex was founded in 1991 at The University of Texas at Austin. We carry out our work by supporting high standards and building system capacity; time Conter was southern to 1971 at the Outstraway or 1986 or research to the State of Content and State or research to the Content of Content of Content or State or nearly 20 states and with 90 percent of Texas's more than 1,000 school districts. We are committed to ensuring that the seesdent of where a child attends school does not limit the academic opportunities he or she can pursue.

For more information about our programs and resources, see our homopage at waw.atdasacenter.org. To access our resources (many of them free), see our products index at www.midsmacenter.org/products. And to learn more about our professional development—and sign up online—go to www.atdanacester.org/pd.

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^{*} For the high school course sequences, we retind on the Common Core State Standards Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards, developed for the CCSS initiative by Achieve, Inc., which convened and managed the Achieve Pathways

Acknowledgments

Developers and facilitators

Union otherwise noted, all staff listed here are affiliated with the Dane Center.

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We gratefully acknowledge the more than 100 school districts and thousands of educators who have informed the development of these

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Introduction

- Phase i: Studying the Standards
- Phase 2: Narrowing the Field of Instructional Materials

Phase 3: Assessing Mathematical Content Alignment

The purpose of Phase 3: Assessing Mathematical Content Alignment is to determine the degree to which the materials are aligned to the standards (content and processes). In Phase 3, participants conduct as in-depth review of the 2-3 instructional materials selected in Phase 2. The Phase 3 process requires selection committee members to use set criteria in order to determine a rating for each sample; to cite examples to justify their score for each sample, and to document standards that are missing or not well-developed in the instructional materials examples.

Implementation

As a whole group, selection committee members should practice applying the Phone 3 rubrie. The purpose of the whole group practice is to promote inter-rater reliability and calibration.

In Phase 3 it is not important to analyze every page, acction, or chapter of a resource. It is important to identify an area, topic, or big idea for the deep content analysis of Phase 3 (e.g. development of equivalent fractions, addition of whole numbers, development of proportionality...). The identified zera, topic, or big idea will be used for all the instructional insterials considered in Phase 3. The area, topic, or big idea can be identified through the use of student achievement data, curriculum priorities challenges, or ideas that typically also are provided instruction in particular grade levels courses. In most cases, Phase 3 will identify the one resource that is best aligned.

Step-by-Step Instructions

- Use your current adoption to practice using the Phase 3 rubric. Select one big idea to focus your analysis (see note above for selecting the area, topic, or big idea).
- Independently, committee members use their current resource, the identified big idea (and associated pages in that resource), and the Phase 3 rubris to score and document the extent to which the material (content and processes) slight to the standards.
- In small groups, committee members share their scoring and justifications. Small groups come to consensus on how the current resource would score on this big idea.
- Each small group shares with the large group their score. Repent the consensus building to generate a large group score on this big idea.
- Clarify any misunderstandings about how to apply the rubric before committee members begin to use Phase 3 rubric on the selected

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Scoring Rubric and Documentation Forms.	3
Documenting Alignment to the CCSS for Mathematics: Standards for Mathematical Practice	6
Documenting Alignment to the CCSS for Mathematics: Standards for Mathematical Content	14

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- 6 Based on the size of the selection committee, determine the number of areas, topics, or big ideas to be examined for each grade course. If the group size is large, more areas, topics, big ideas can be examined within each grade iced course.
- Make sure committee members have multiple copies of the Phase 3 rubrie.
- 8 Committee members apply the Phase 3 rubric for each of the materials.
- Establish a time line for groups to complete and submit Phase 3 documentation.
- 10. Establish a data collection and analysis process to attain a rating for each resource.

Materials and Supplies

- Phase 3: Assessing Mathematical Content Alignment black line master multiple copies per person
- Currently used instructional resource
- The 2 to 4 instructional materials selected in Phase 2

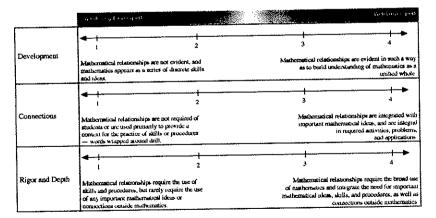
Phase 4: Assessing Vertical Alignment of Instructional Materials

Important Mathematical ideas: Understanding the scoring

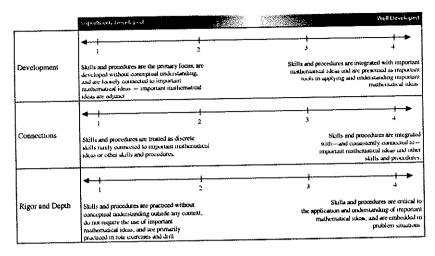
	, which, to way ed		Sea breckped
	1 2	3	
Development	Important mathematical ideas are alluded to simply or are mesong, approached primarily from a skill level, or provided for students outside any context	conceptually development of real-world exert	emntical ideas are evident, ped, and emerge within the ples, unforesting problems, or student my estigations
	1 2	3	+
Connections	Important mathematical ideas are developed independently of each other (i.e., they are discrete, independent ideas).	expending and co mathematical also	col ideas are developed by nuccting to other importan as in such a way as to buil- ematics as a unified whole
	1 2	3	
Rigor and Depth	Important mathematical ideas are applied in routine problems or in using formulated procedures, and are extended in separate optional problems.	extended in novel si copient, requiring	ustical ideas are applied an inations or embedded in the githe extension of important matical ideas and the two multiple approaches

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Mathematical Relationships: Understanding the scoring



Skills and Procedures: Understanding the scoring



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Reviewed By:	
Title of Instructional Materials:	

Documenting Alignment to the Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and numpler forms of the original problem in order to gain insight into its solution. They monator and evaluate their progress and change council forcessary. Older students might, depending on the context of the problem; transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regulatrity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their mones to problems using a different method, and they continually ask themselves, "Does this make sense." They can understand the approaches of others to solving complex problems and stentify correspondences between different approaches.

Indicate the chapter(s), meclan(s), or page(s) reviewed.

Portions of the mathematical practice that are extending or not well developed in the instructional materials (if any):

Suramery/Justification/Evidence



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6

Standards for Mathematical Practice	
2. Reason abstractly and quantitatively.	
the representing symbols as if they have a life of their own, with needed during the meninglation process in order to probe into it.	of their relationships in problem situations. They bring (we complementary abilities to be decontextualize—to abstract a given situation and represent it symbolicially and manipulation theorems of the symbolic statement of the spirit of their referents—and the ability to contextualize, to pause as the referents for the symbols involved. Quantizative reasoning catalis habits of creating a can is involved; attending to the meaning of quantities, not just how to compute them; an aid objects.
indicate the chapter(s), section(s), or page(s) reviewed.	Portions of the mathematical practica that are taileding or not well developed in the instructional materials (if early):
encamany/Junification/Evidence	Overall Rating
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Charles A. Dana Center	
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ocumenting Alignment to the andards for Mathematical Practice	Title of Instructional Materials:
ocumenting Alignment to the andards for Mathematical Practice Model with mathematics.	Title of Instructional Materials:
andards for Mathematical Practice Model with mathematics. Mothematically proficient students can apply the mathematics the grades, this might be as simple as writing an addition equation to plan a school event or analyze a problem in the community. By his observable how one quantity of interest depends on another. Mathematically the profice and approximations to simplify a complicated situation and mup their relationships using analyze those relationships to mathematically to draw cancel instead.	ey know to solve problems arising in everyday life, society, and the wockplace. In early o describe a situation, in middle grades, a student might apply proportional reasoning to nigh school, a student night use geometry to solve a design problem or use a function themsatically proficient students who can apply what they know are comfortable mixing too, realizing that these may need revision later. They are able to identify important grant tools as diagrams, two-way tables, graphs, 8owcharts and formulas. They can They multiply interpret their problems of the second properties.
andards for Mathematical Practice Model with mathematics. Mothematically proficient students can apply the mathematics the grades, this might be so simple as writing as addition equation to plan a school event or analyze a problem in the community. By it to describe how one quantity of interest depends on another Mathematics in a market of students and approximations to simplify a complicated situational time for realization time.	ey know to solve problems arising in everyday life, society, and the wockplace. In early o describe a situation, in middle grades, a student might apply proportional reasoning to nigh school, a student night use geometry to solve a design problem or use a function themsatically proficient students who can apply what they know are comfortable mixing too, realizing that these may need revision later. They are able to identify important grant tools as diagrams, two-way tables, graphs, 8owcharts and formulas. They can They multiply interpret their problems of the second properties.
andards for Mathematical Practice Model with mathematics. Mathematically proficient students can apply the mathematics the grades, this might be as simple as writing an addition equation to plan a school event or analyze a problem in the community. By his describe how one quantity of interest depends on mother. Mathematically a complicated situation assumptions and approximations to simplify a complicated situation and map their relationships using quantities in a practical situation and map their relationships using manify or those relationships mathematically to draw conclusions. The article of these relationships mathematically to draw conclusions, and the control of the results make sense, possibly improving the	ey know to solve problems arising in everyday life, society, and the workplace. In early o describe a situation. In middle grades, a student might apply proportional reasoning to night shoot, a student might use geometry to solve a design problem or use a function themsitically proficient students who can apply what they know are comfortable making too, realizing that these may need revision later. They are able to identify important ag such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can They routinely interpret their mathematical results in the context of the situation and model if it has not served its purpose. Portions of the medicametral practice that are missing or not will developed in the

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Reviewed By:

Reviewed By:	
Title of Instructional Materials:	

Documenting Alignment to the Standards for Mathematical Practice

3. Construct viable arguments and critique the reasoning of others.
Mathematically proficient students understand and use stated assumptions, definitions, and previously established ments in constructing arguments. They make coopectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and to be counterexamples. They partly their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arrose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct topic or reasoning from that which is flawed, and—if there is a flaw in an argument ex-optain what it is. Hiemountary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or make formal until later grades. Later, and the transfer sense, and ask useful questions to clarify or improve the arguments.

and any (a) memorial or balletin Leasener	Portions of the methematical practice that are missing or not well developed in the instructional materials (if any):

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Documenting Alignment to the Standards for Mathematical Practice

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the inright to be gamed and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When mathing mathematical models, they know that technology can enable them to visualize the results of varying insumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical recourses, such as digital content located on a website, and use them to puse or solve problems. They are able to use technological tords to explore and deepon their understanding of consepts.

Postions of the machinestical practice that are mining or not well developed in the instructional materials (if any):

Overall Rating

1 2 3 4

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10

	Reviewed By:		Reviewed By:
	Title of Instructional Materials:		Title of Instructional Materials:
MATHEMATICS: GRADE 8 THE NUMBER SYSTEM 8.NS		MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8	
Know that there are numbers that are not rational, and approximate	Summary and documentation of how the domain, cluster, and standard are		/\
them by rational numbers.	met. Cite examples from the meterials.	Work with radicals and integer exponents.	Summary and documentation of how the domain/cluster, and standard are met. Cite examples from the materials.
\$.NS.2	Important Methernetical ideas	8.EE.1	/
Lise rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram,	1 2 3 4	Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^4 \times 3^3 \times 1/3^2 \times 1/27$.	Important Mathematical Ideas
and estimate the value of expressions (e.g., m -). For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between		5	
1.4 and 1.5, and explain how to continue on to get better approximations.	Skills and Procedures	a 21, a = 0 not on	Skills and Procedures
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Comparing Sordaring of R not address od, ost.	Mathematical Relationships \ +		Mathematical Relationships
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, , , , , , , , , , , , , , , , , , ,		Indicate the chapter(s), section(s), and/or page(s) reviewed.	
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):		Portions of the domain, cluster, and standard that are missing or not well
		10-5	developed in the instructional materials (if any);
ALL CONTRACTOR OF THE PROPERTY			
	Overall Rating		Overall Rating
	1 2 3 4		2/ 5 4
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ı	Reviewed By:		
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MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8.	fitle of Instructional Materials:		tle of Instructional Materials:
		MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8,8	E
Work with radicals and integer exponents.	Summary and documentation of how the domain, cluster, and standard are	Work with radicals and Integer exponents.	Summary and documentation of how the domain, cluster, and standard are
B.EE.2	met. Cite examples from the meterials.	BEES	met. Cite examples from the materials.
Use square root and cube root symbols to represent solutions to equations	Important Mathematical Ideas	Gee numbers expressed in the form of a single digit times an integer power	Important Mathematical Ideas
of the form $x^2 = p$ and $x^2 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes.	1 2 / 3/ 4	of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, astimate the	1 2 3 4
	h / / /	population of the United States as 3 × 10° and the population of the world	/
Only sq. voots address,	Skills and Procedures	as 7 × 10°, and determine that the world population is more than 20 times larger.	Skills and Procedures
7,6	• • • • • • • • • • • • • • • • • • • •	A / A !	1 2 3 4
U	Mathernabosi Relationships	1 1/2-1/2013 1	
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	Summary / Justification / Evidence		Summary / Justification / Evidence
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Overall Rating

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ocumenting Alignment to the andards for Mathematical Practice	
Attend to precision.	
reasoning. They state the meaning of the symbols they choose, specifying units of measure, and labeling axes to clarify the cor-	by to others. They try to use clear definitions in discussion with others and in their own including using the equal sign consistently and appropriately. They are careful about respondence with quantities in a problem. They encludes accurately and efficiently, sate for the problem context. In the elementary grades, students give carefully formulated they have learned to examine claims and make explicit use of definitions.
indicase the chapter(d), section(d), et paye(d) reviewed.	Pertions of the methametical practice that are adapting or not well developed in the instructional materials (if any):
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ocumenting Alignment to the tandards for Mathematical Practice	ALC SIGNOCOCCO
8. Look for and express regularity in repeated reasoning.	
Mathematically proficient students notice if calculations are n night notice when dividing 25 by 11 that they are repeating if paying attention to the calculation of slope as they repeatedly abstract the equation $(y-2)/(z-1) = 3$. Noticing the regularity	repeated, and look both for general methods and for abortroits. Upper elementary students he same calculations over and over again, and conclude they have a repeating decimal. By check whether points are on the line through (1, 2) with slope 3, middle school students might by in the way terms cancel when expanding (x + 1xx + 1), (x + 1xx + x + 1), and in for the sum of a geometric series. As they work to solve a problem, mathematically stending to the details. They continually evaluate the remonstheness of their intermediate
To discuse the chapter(s), surnicon(s), or puge(s) scriemed.	Portions of the mathemetical generics that are missing or not well developed in the instructional materials (if any):
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m or structure. Young students, for example, might notice that three and sevenction of shapes according to how many sides the shapes have. Later, student leterally about the distributive property, in the expression $x^2 + 9x + 14$, olde inference of an existing line in a geometric figure and can use the strategy of an overview and shift perspective. They can see complicated things, such as sejects. For example, they can see $5 - 3(1 - y)^2$ as 5 minus a positive number tile real numbers x and y .	r studenta Irawing an xne algebraic
Portions of the mathematical pearties that are missing or not well develor instructional materials (if any):	ped in the
Overall Rating	
	ection of shapes according to now many shear in singles and $+9x + 14$, oldesificance of an existing line in a geometric figure and can use the strategy of a noverview and shift perspective. They can see complicated things, such as sejects. For example, they can see $5 - 3(x - y)^3$ as 5 minus a positive number in real numbers x and y . Portions of the mathematical penetics that are missing or not well develop

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MATHEMATICS: GRADE 8 - THE NUMBER SYSTEM - 8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.	Summary and documentationet. Cite examples from the	on of how materials	the domain, clu	ster, and sta	ndard are.
B.NS.1	Important Mathematical Ideas				_/-++
(now statt numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.		1	2	, a	1
Good Magram &	Skills and Procedures	+	2	3	1,
Good diagram & discussion.	Mathematical Relationships	1	2	 	1
	Summary / Justification / E	vidence			
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	Title of Instructional Materials:		Title of Instructional Materials:
MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS -	8.EE	MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS -	
Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation of how the domein, cluster, and standard are	Analyze and solve linear equations and pairs of simultaneous linear	
8.EE.7b	max. Cité examples from the materials.	equations.	Summery and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
Solve linear equations in time variable.	Important Mathematical Ideas	Analyze and solve pairs of simultaneous linear equations.	Important Mathematical Ideas
 Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the 	, , , , , , , , , , , , , , , , , , , ,	a. Understand that solutions to a system of two linear equations in	1 2 3
distributive property and collecting like terms.	Skits and Procedures	two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously	y, / /
"Mas May I was " Dan	1 2 3		Skills and Procedures
More Ham I vay " = 3 g ar Alg. + itus = good] '	\ \ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	
Ma titus Sand	Mathematical Relationships		Mathematical Relationships
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MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8	Title of Instructional Materials:	T	itle of Instructional Materials:
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Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.	Analyze and solve linear equations and pairs of simultaneous linear	Summary and documentation of now the domain, cluster, and standard are
8.E.S.b	Important Mathematical Ideas	equations. 8.EE.8c	met. Cite examples from the materials
 Analyze and solve pairs of eigentaneous linear equations. Solve systems of two linear equations in two variables algebraically, 	1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1	Analyze and solve pairs of simultaneous linear equations.	Importent Mathematical Ideas
and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, $3x + 2y = 5$ and $3x + 2y = 6$ here		 Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two 	\frac{1}{2} \frac{2}{3} \frac{4}{4}
no solution because 3x + 2y cannot simultaneously be 5 and 6.	Skills and Procedures	pairs of points, determine whether the line through the first peir of points intersects the line through the second par	Skills and Procedures
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MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8.8		MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8.8	EE.
Work with radicals and integer exponents.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.	Understand the connections between proportional relationships, lines, and linear equations.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.EE.4 Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scentific notation and choose units of appropriate size for measurements	Important Mathematical Ideas	8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-	Important Mathematical Ideas
of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology. Study to want of the property of the pro	Skills and Procedures	ome equation to determine which of two moving objects has greater speed	Skills and Procedures 1 2 3 4
instead, this section is		NOV addrissen	Mathematical Relationships 2 3 4
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MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8		MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8	.EE
		Analyze and solve linear equations and pairs of simultaneous linear	Summary and documentation of how the domain, cluster, and standard as
Understand the connections between proportional relationships, lines, and linear equations.	summary and documentation of how the domain, calleter, and summard and met. Cite examples from the materials.	equations.	met. Cita examples from the materials.
8.EE.9 Use surniser triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for	Important Mathematical Ideas	Solve linear equations in one variable. Ove examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given	Important Mathematical Ideas 1 2 3
t mile the intercepting the vertical axis at b	Sisfs and Procedures 1 2 3 4	equation into simpler forms, unto an equivalent equation of the serion $x=a, x=a, cr a=b$ (osuits (where x and b are different numbers).	Skilks and Procedures 1 2 3
drawings used; bowever,	Methemetical Relationships 4+ 1 1 1 2 3 3 1	Notaddrossed	Methamatical Relabonships
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	Title of Instructional Materials:	
MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F		MATHEMATICS: GRADE
Use functions to model relationships between quantities.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.	Understand congruence an
8.F.6		transparencies, or geometr
Describe qualitatively the functional relationship between two quantities	Important Mathematical ideas	5.G.1a
by analyzing a graph (e.g., where the function is increasing or decreasing, sinear or nonlinear). Sketch a graph that exhibits the qualitative features of a	1 2 / 3. / 4	Verify experimentally the translations:
function that has been described verbally.		ii. Lines are taken to line
	Skills and Procedures	##me length.
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MATHEMATICS: GRADE 5 - GEOMETRY - 8.G		MATHEMATICS: GRADE 8 -
		MATHEMATICS! GRADE 8-
Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation of how the domain, cluster, and standard are	Understand congruence and
8.Q.1b	met. Cite examples from the meterials,	transparencies, or geometry :
Verify experimentally the properties of rotations, reflections, and	Important Mathematical Ideas	8.G.1c
translations:	1 2 3 4	 Verify experimentally the potranslations:
b. Angles are taken to angles of the same measure.		c. Parallel lines are taken
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derstand congruence and similarity using physical models, insparencies, or geometry software.	Summary and documentation of how the domain, citister, and standar met. Cits examples from the materials.
3.1a	The state of the s
Verify experimentally the properties of rotations, reflections, and	Important Mathematical Ideas
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 Lines are taken to lines, and line segments to line segments of same length. 	
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rstand congruence and similarity using physical models, parencies, or geometry software. It is a support to the properties of rotations, reflections, and installons:	Summary and documentation of how the domain, cluster, and standard met. Cite examples from the materials. Important Mathematical Ideas
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MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F		MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F			
	Summary and documentation of how the domein, cluster, and standard are	Define, evaluate, and compare functions.	Summery	and documentation of how the examples from the materials.	domain, cluster, and standard are
Define, avaluate, and compare functions.	met. Cite examples from the materials.		met. Cite e	xamples from the materials.	/ \
8.5.1	Important Mathematical Ideas	8.F.2 Compare properties of two functions each represented in	Important N	fathematical Ideas 😽	-
I indecetand that a function is a rule that assigns to each input exactly one	1 2 3 4	(alcebraically graphically, pumerically in tables, or by Ver	OME CHARCENDECKEN): 1	1	2 / 3 / 4
output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.		For example, given a linear function represented by a teb a linear function represented by an algebraic expression,	determine which		
	Skills and Procedures	function has the greater rate of change	Skills and P	todedures +	
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	Mathematical Relationships		Mathematic	cal Relationships +	2 3 4
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MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F		MATHEMATICS: GRADE 8 ~ FUNCTIONS ~ 8.F			
	Summery and documentation of how the domain, cluster, and standard are	Use functions to model relationships between quan	Summar	ry and documentation of how to examples from the materials.	he domain, cluster, and standard acr
Define, evaluate, and compare functions.	met. Cite examples from the materials.	\	met. Un	AXAMPLES From the Hardwise.	
8.F.3	Important Mathematical Idéas	8.F.4 Construct a function to model a linear relationship betw	man han criscitions	t Mathematical Ideas 4	- 1 / 1
interpret the equation $y = mx + b$ as defining a linear function, whose grap		Determine the rate of change and initial value of the full	nction from &	1	2 3 7
is a straight line; give examples of functions that are not linear. For example the function A = 2 giving the area of a square as a function of its side leng		description of a relationship of from two (x, y) values, a from a table or from a graph, interpret the rate of chang	pe and initial value of		
is not limar because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.	Skills and Procedures	a linear function in terms of the situation it models, and or a table of values.	in terms of its graph Skills and	d Procedures	
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MATHEMATICS: GRADE 8 - GEOMETRY - 8,G		MATHEMATICS: GRADE 8 - GEOMETRY - 8.G	Title of Instructional Materials:
Understand and apply the Pythagorean Theorem. 8.G.6	Summery and documentation of how the domain, cluster, and standard are mat. Cite examples from the materials.	Understand and apply the Pythagonaan Theorem.	Summary and documentation of how the domain, cluster, and standard for met. Cite examples from the materials.
Explain a proof of the Pythagorean Theorem and its converse.	Important Methematical Ideas	8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	Important Mathematical Ideas 1 2 3 4
To Factor Assert	Skills and Procedures	Good anniching to	Skds and Procedures
More Explaination	Mathematical Relationships	real-life.	Mathematical Relationships
norded, very lacked	Summary / Justification / Evidence Create a hours of		Summery / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):	indicate the chapter(s), section(s), and/or page(s) raviewed.	Portions of the domain, cluster, and standard that are missing or not well
3-2		3.3	developed in the instructional materials (if any):
33	Overall Rating		Overall Rating
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MATHEMATICS; GRADE 8 - GEOMETRY - 8.G	Reviewed By: Title of Instructional Materials:		itle of Instructional Materials:
Indensiand and apply the Pythagorean Theorem.	Summary and documentation of flow the domain, cluster, and standard are met. Cite examples from the insteriels.	Solve real-world and mathematical problems involving volume of	Surrowary and documentation of household and the description of the surroward and th
I.G.8 Apply the Pythagorean Theorem to find the distance between two points		cytinders, conos, and spheres. 8.G.9	Summary and documentation of how the domain, cluster, and standard are met. Gits examples from the materials.
Door drinkle system.	Stella and Procedures	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Important Mathematical Ideas
NIT		If that load to during	State and Procedures 1 2 3 4
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idicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidenics	Indicate the chapter(s), section(s), and/or page(s) prviewed.	Symmary / Justification / Evidence
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ATHEMATICS: GRADE 8 - GEOMETRY - 8.G	Summary and documentation of how the domain, cluster, and standard/are	Understand congruence and similarity using physical models,	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
nderstand congruence and similarity using physical models, ansparencies, or geometry software.	Summary and documentation of how the domain, cluster, and stational of met. Cite examples from the materials.	transparencies, or geometry software.	
.0.2 Inderstand that a two-dimensional figure is congruent to another if the econd can be obtained from the first by a sequence of rotations, reflections and translations, given two congruent Signers, describe a sequence that	Important Mathematical Ideas	Describe the effect of dilations, translations, rotations, and reflections on two dimensional figures using coordinates.	important Mathematical Ideas
shibits the congruence between them:	Slots and Procedures 1 2 3 4	Describe the effect of distions, translations, rotations, and reflections on two dimensional figures using coordinates. Ward Mary Study Problems Theorem Study Mary Study	Skills and Procedures
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be Charles A. Dana Center	35	The Charles A. Danis Center	36
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Understand congruence and similarity using physical models, transparencies, or geometry software.	met. Cite examples from the materials.	transparencies, or geometry software. 8.G.6	met. Cite examples from the meterials.
8.G.4 Understand that a two-dimensional figure is similar to another if the secondar be obtained from the first by a sequence of rotations, reflections, translations, and distations; given two similar two-dimensional figures, describe a sequence that orbibits the similarly between them.	d Important Mathematical ideas 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Use informal arguments to establish facts about the angle sum and extent angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of transfers. For example, arrange three copies of the same triangles of that the sum of the three singles appears to form a line, and give an argument in terms of	
Text Implies	Skills and Procedures 1 2 3 4	transversals why this is so.	Mathernaboal Relationships
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estigate patterns of association in bivariate data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the meterials.
P.1	Important Mathematical Ideas
nstruct and interpret scatter plots for bivariate measurement data to estigate patients of association between two quantities. Describe	3 4
terns such as clustering, outliers, positive or negative association, imean	7 1
sociation, and nonlinear association.	Skills and Procedures
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to the equation of a linear model to solve problems in the context of variate measurement data, interpreting the alope and intercept. For	1 2 3 4
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by fit a straight line, and informally assets the model fit by judging t	
s of the date points to the line.	Skills-and Procedures
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Pronting-Hall Course 3 Reviewed by

> The Charles A. Dana Center at the University of Texas at Austin

Instructional Materials Analysis and Selection

Phase 3:

Assessing Content Alignment to the Common Core State Standards for Mathematics

A project of

The Indiana Education Roundtable, The Indiana Department of Education, and

The Charles A. Dana Center at The University of Texas at Austin

2010-2011

Instructional Materials Analysis and Selection Assessing Content Alignment to the Common Core State Standards for Mathematics

This tool provides educators with a structured way to make informed decisions when selecting mathematics instructional materials. In particular, it can help you become more knowledgeable about the Common Core State Standards for Mathematics so you can select instructional materials aligned with these standards.

This resource can also be used with the Dana Center's larger 4-phase Instructional Materials Analysis and Selection toolset: Phase 1: Studying the Standards, Phase 2: Narrowing the Field of Instructional Materials, Phase 3: Assessing Subject-Area Content Alignment, and Phase 4: Assessing Vertical Alignment of Instructional Materials. The particular resource you hold is a phase 3 tool that has been customized for assessing the alignment of instructional materials with the Common Core State Standards for Mathematics. Note that in 2009, the Dana Center developed a similar tool for Indiana educators to use in analyzing the alignment of instructional materials to Indiana's Academic Standards for Mathematics.

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contact us at dana-txshop@utlists.utexas.edu.

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About the development of this resource

This tool, Instructional Materials Analysis and Selection: Assessing Content Alignment to the Common Core State Standards for Mathematics, draws on the Dana Center's nearly 20 years of experience in strengthening education and has been used extensively in Texas and, increasingly, other states, to help local school districts and schools select instructional materials aligned with their standards. Development and production of the Instructional Materials Analysis toolset was supported by the Charles A. Dana Center.

This resource consists of a set of 15 individual grade-level / course documents that span kindergarten through the third year of high school mathematics. There is a document for each grade from kindergarten through 8, and six documents for high school mathematics (one each for the three courses in the traditional high school pathway Algebra I, Geometry, Algebra II; and one each for the three courses in the integrated high school pathway Mathematics I, Mathematics II, and Mathematics III).* At the request of various states and other entities, the Dana Center has populated this *Instructional Materials Analysis and Selection* tool with standards from the *Common Core State Standards for Mathematics* for use by local districts in selecting instructional materials aligned with these standards.

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October 2010 release.

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About the Charles A. Dana Center at The University of Texas at Austin

The Dana Center works to raise student achievement in K-16 mathematics and science, especially for historically underserved populations. We do so by providing direct service to school districts and institutions of higher education; to local, state, and national education leaders; and to agencies, nonprofits, and professional organizations concerned with strengthening American education.

The Center was founded in 1991 at The University of Texas at Austin. We carry out our work by supporting high standards and building system capacity; collaborating with key state and national organizations to address emerging issues; creating and delivering professional supports for educators and education leaders; and writing and publishing education resources, including student supports. Our staff of more than 60 has worked with dozens of school systems in nearly 20 states and with 90 percent of Texas's more than 1,000 school districts. We are committed to ensuring that the accident of where a child attends school does not limit the academic opportunities he or she can pursue.

For more information about our programs and resources, see our homepage at www.utdanacenter.org. To access our resources (many of them free), see our products index at www.utdanacenter.org/products. And to learn more about our professional development—and sign up online—go to www.utdanacenter.org/pd.

^{*} For the high school course sequences, we relied on the Common Core State Standards Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards, developed for the CCSS initiative by Achieve, Inc., which convened and managed the Achieve Pathways Group.

Acknowledgments

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Our thanks

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Introduction

Phase 1: Studying the Standards

Phase 2: Narrowing the Field of Instructional Materials

Phase 3: Assessing Mathematical Content Alignment

The purpose of Phase 3: Assessing Mathematical Content Alignment is to determine the degree to which the materials are aligned to the standards (content and processes). In Phase 3, participants conduct an in-depth review of the 2-3 instructional materials selected in Phase 2. The Phase 3 process requires selection committee members to use set criteria in order to determine a rating for each sample, to cite examples to justify their score for each sample, and to document standards that are missing or not well-developed in the instructional materials examined.

Implementation

As a whole group, selection committee members should practice applying the Phase 3 rubric. The purpose of the whole group practice is to promote inter-rater reliability and calibration.

In Phase 3 it is not important to analyze every page, section, or chapter of a resource. It is important to identify an area, topic, or big idea for the deep content analysis of Phase 3 (e.g. development of equivalent fractions, addition of whole numbers, development of proportionality...). The identified area, topic, or big idea will be used for all the instructional materials considered in Phase 3. The area, topic, or big idea can be identified through the use of student achievement data, curriculum priorities/challenges, or ideas that typically make up a greater portion of instruction in particular grade levels/courses. In most cases, Phase 3 will identify the one resource that is best aligned.

Step-by-Step Instructions

- 1. Use your current adoption to practice using the Phase 3 rubric. Select one big idea to focus your analysis (see note above for selecting the area, topic, or big idea).
- 2. Independently, committee members use their current resource, the identified big idea (and associated pages in that resource), and the Phase 3 rubric to score and document the extent to which the material (content and processes) aligns to the standards.
- 3. In small groups, committee members share their scoring and justifications. Small groups come to consensus on how the current resource would score on this big idea.
- 4. Each small group shares with the large group their score. Repeat the consensus building to generate a large group score on this big idea.
- 5. Clarify any misunderstandings about how to apply the rubric before committee members begin to use Phase 3 rubric on the selected materials.

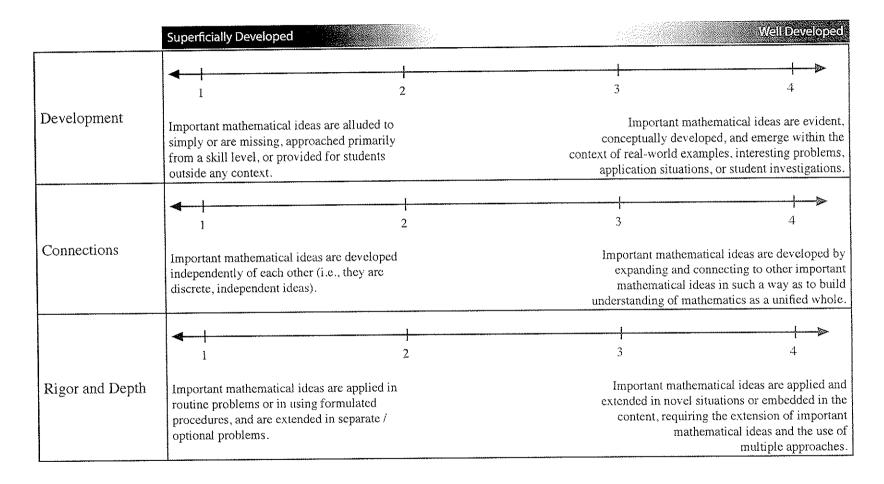
- 6. Based on the size of the selection committee, determine the number of areas, topics, or big ideas to be examined for each grade/course. If the group size is large, more areas, topics, big ideas can be examined within each grade level/course.
- 7. Make sure committee members have multiple copies of the Phase 3 rubric.
- 8. Committee members apply the Phase 3 rubric for each of the materials.
- 9. Establish a time line for groups to complete and submit Phase 3 documentation.
- 10. Establish a data collection and analysis process to attain a rating for each resource.

Materials and Supplies

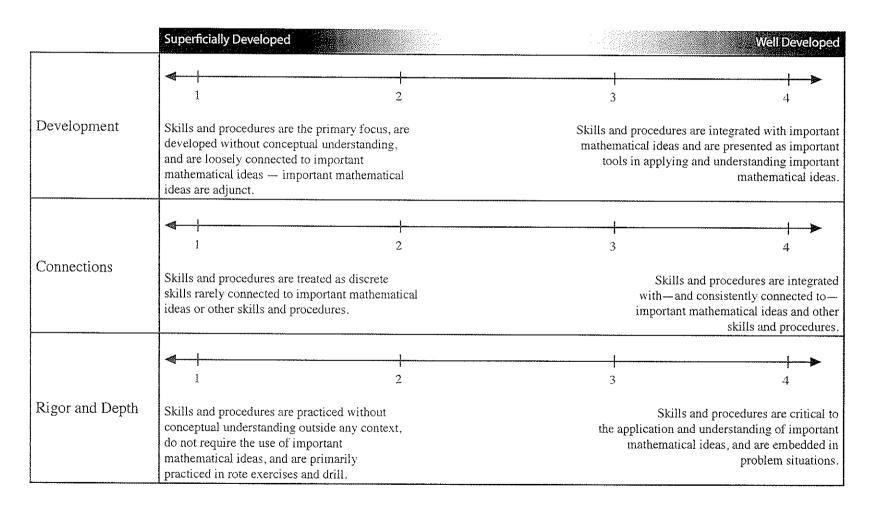
- Phase 3: Assessing Mathematical Content Alignment black line master multiple copies per person
- Currently used instructional resource
- The 2 to 4 instructional materials selected in Phase 2

Phase 4: Assessing Vertical Alignment of Instructional Materials

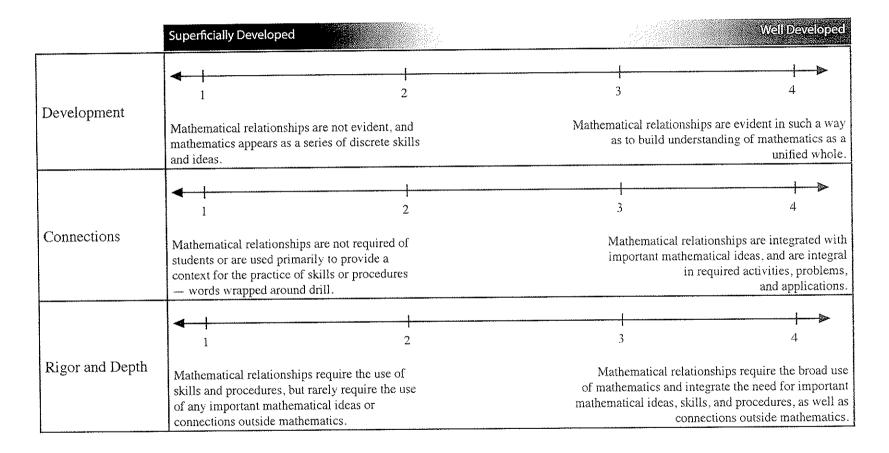
Important Mathematical Ideas: Understanding the scoring



Skills and Procedures: Understanding the scoring



Mathematical Relationships: Understanding the scoring



Reviewed By:	
Title of Instructional Materials:	

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating



Reviewed By:	
Title of Instructional Materials:	

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

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Reviewed By:	
Title of Instructional Materials:	

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Reviewed By:	
Title of Instructional Materials:	

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:	
Title of Instructional Materials:	

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation (y-2)/(x-1)=3. Noticing the regularity in the way terms cancel when expanding (x-1)(x+1), $(x-1)(x^2+x+1)$, and $(x-1)(x^3+x^2+x+1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Overall Rating

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - THE NUMBER SYSTEM - 8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.	Summary and documentati met. Cite examples from the			ster, and star	ndard are
8.NS.1					
Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	1	2	3	
	Mathematical Relationships	1	2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
Lessons 2-2 + 3-1	Portions of the domain, clu developed in the instruction			missing or n	ot well
p. 61 Activity Sab					
(good explanation)	Overall Rating	∢- 	2	3	

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Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - THE NUMBER SYSTEM - 8.NS

Summary and documentation met. Cite examples from the	on of how to materials.	he domain, clus	ster, and star	idard are
Important Mathematical Ideas	1	2	3	4
Skills and Procedures				>
	1	2	3	4
Mathematical Relationships			J	
	1	2	3	4
Summary / Justification / Ev	/idence			
Portions of the domain, clus developed in the instruction	ster, and sta al material	andard that are s (if any):	missing or n	ot well
Overall Rating	←		-	
	met. Cite examples from the Important Mathematical Ideas Skills and Procedures Mathematical Relationships Summary / Justification / Eventual Portions of the domain, clusted developed in the instruction	met. Cite examples from the materials. Important Mathematical Ideas 1 Skills and Procedures 1 Mathematical Relationships 1 Summary / Justification / Evidence Portions of the domain, cluster, and stadeveloped in the instructional material	met. Cite examples from the materials. Important Mathematical Ideas 1 2 Skills and Procedures 1 2 Mathematical Relationships 1 2 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are developed in the instructional materials (if any):	Important Mathematical Ideas 1 2 3 Skills and Procedures 1 2 3 Mathematical Relationships 1 2 3 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or n developed in the instructional materials (if any):

Reviewed By:	
Title of Instructional Materials:	

Work with radicals and integer exponents.	Summary and documentation met. Cite examples from the	on of how the materials.	he domain, cl	uster, and stand	lard are
8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.	Important Mathematical Ideas	4- I	2	3	4
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
Lesson 2-7, 12-3, 12-5	Portions of the domain, cluded developed in the instruction			e missing or no	t well
	Overall Rating	1	2		- → 4

Reviewed By:	
Title of Instructional Materials:	

Work with radicals and integer exponents.	Summary and documentation met. Cite examples from the		ne domain, clu	ster, and stand	lard are
8.EE.2	Important Mathematical Ideas	4 1	;	ī	
Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.	important manernatical recas	1	2	3	4
	Skills and Procedures	 			
		1	2	3	4
	Mathematical Relationships	{ 	··· ···		}
		1	2	3	4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
915501 3-1 of CC-13	Portions of the domain, cluded developed in the instruction (10 10 10 10 10 10 10 10 10 10 10 10 10 1	nal material	s (if any).	_	ot well
	Overall Rating		2		

Reviewed By:	
Title of Instructional Materials:	

Work with radicals and integer exponents.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
8.EE.3					
Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the	Important Mathematical Ideas	1	2	3	4
population of the United States as 3 × 10° and the population of the world as 7 × 10°, and determine that the world population is more than 20 times larger.	Skills and Procedures	1	 2	-	
	Mathematical Relationships	↓ 1	2	3	→ 4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
Lessons 2-8 + 12-5	Portions of the domain, clus developed in the instruction	nal materials	s (if any):	missing or no	ot well
y only 2 quistions	Overall Rating	·	· • •		

Reviewed By:	
Title of Instructional Materials:	

Work with radicals and integer exponents.	Summary and documentati met. Cite examples from the			ster, and stan	dard are
8.EE.4 Perform operations with numbers expressed in scientific notation, including	Important Mathematical Ideas	4-			
problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by		1	2	3	4
technology.	Skills and Procedures	1	2	3	4
	Mathematical Relationships	∢ 1	2	3	}
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
dessons 2-8, 12-3, 12-5 activity Jab	Portions of the domain, clu developed in the instruction			missing or n	of well
lab (Overall Rating	{ 1	2	3	

Reviewed By:	
Title of Instructional Materials:	

Understand the connections between proportional relationships, lines, and linear equations.	Summary and documentati met. Cite examples from the			ster, and stan	dard are
8.EE.5					
Graph proportional relationships, interpreting the unit rate as the slope of	Important Mathematical Ideas	 			
the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.		i	2	3	4
	Skills and Procedures	 	 		→
		1	2	3	4
	Mathematical Relationships	< 			
		1	2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clu developed in the instruction	nal materia	le (if any):	-	ot well
desson 11-4 + cc-10	Pretty good	butit	ruds	Mote	
octivity	Compari	SOME		<u>^</u>	
$\mathcal{V}_{a}\mathcal{O}^{v}$	Overall Rating	 	1 /		→
		1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

Understand the connections between proportional relationships, lines, and linear equations.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
8.EE.6 Use similar triangles to explain why the slope <i>m</i> is the same between any	Important Mathematical Ideas	 			
two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b .		1	2	3	4
	Skills and Procedures				
		1	2	3	4
	Mathematical Relationships	4-1	1		<u>l_</u> >
		1	2	3	4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
Jesson-11-4, 11-5, 11-6	Portions of the domain, clus developed in the instruction			missing or no	ot well
activity 1 sh 00-11					
kakot i	Overall Rating		2	3	-

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation met. Cite examples from the			ster, and stand	lard are
8.EE.7a7. Solve linear equations in one variable.	Important Mathematical Ideas	 	2	3	 4
a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).	Skills and Procedures	1	2		
	Mathematical Relationships	1	2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Ex	vidence	ood for	ritique	S
Lessons 6-1, 6-3, 6-4	Portions of the domain, cludeveloped in the instruction	nal materia	le (if any).	•	ot well
	Overall Rating	 	2		4

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation met. Cite examples from the			ster, and stan	idard are
 8.EE.7b 7. Solve linear equations in one variable. b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the 	Important Mathematical Ideas	1	2	3	4
distributive property and collecting like terms.	Skills and Procedures	1	2	3	
	Mathematical Relationships	1	2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
Hespies VII VIB VII	Portions of the domain, cluded developed in the instruction			missing or n	ot well
	Overall Rating	1	2	3	

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
8. Analyze and solve pairs of simultaneous linear equations. a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.	Important Mathematical Ideas	1	2	3	 → 4
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
GPS P. 544 CC-5 CC-12	Portions of the domain, cludeveloped in the instruction	111	- (:5		
	Overall Rating	4	2	3	+++ 4

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Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
 8. EE.8b 8. Analyze and solve pairs of simultaneous linear equations. b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y = 5 and 3x + 2y = 6 have 	Important Mathematical Ideas	1	2	3	
no solution because 3x + 2y cannot simultaneously be 5 and 6.	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Ev	vidence			
CC-12	Portions of the domain, cluded developed in the instruction	nal materia	andard that are	missing or ne	ot well
	Overall Rating	1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation of how the domain, cluster, and stand met. Cite examples from the materials.			iard are	
8.EE.8c					
8. Analyze and solve pairs of simultaneous linear equations.	Important Mathematical Ideas	 			 ->
c. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of	Skills and Procedures	1	2	3	4
points intersects the line through the second pair.	Skills and Procedures	1	2	3	
	Mathematical Relationships	4		1	
		1	2	3	4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
CC-12	Portions of the domain, cluded developed in the instruction			missing or no	ot well
	No sys	HIMO	doma	HOUS	
	Overall Rating	<u> </u>	2		

Reviewed By:	
Title of Instructional Materials:	

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard met. Cite examples from the materials.				
8.F.1	Important Mathematical Ideas		1	ı	1.5
Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. ¹	Important Mathematical (deas	1	2	3	4
N. Control of the Con	Skills and Procedures	<u> </u>			
- Thous lost Put a		1	2	3	4
Input 10th that are	Mathematical Relationships	1	2	3	
	Summary / Justification / E	vidence			
1 Function notation is not required in Grade 8. Indicate the chapter(s), section(s), and/or page(s) reviewed.					
Lessons 11-3 + 11-5	Portions of the domain, cludeveloped in the instruction	nal material	a (if any).	•	
	Overall Rating		2	3	 }

Reviewed By:	
Title of Instructional Materials:	

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standard met. Cite examples from the materials.				
8.F.2				· · · · · · · · · · · · · · · · · · ·	
Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which	Important Mathematical Ideas	1	2	3	4
function has the greater rate of change.	Skills and Procedures	4 1	f	1	1.
		1	2	3	4
	Mathematical Relationships	4			
		1	2	3	4
	Summary / Justification / Ev	/idence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, cludeveloped in the instruction	nal materia	ls (if anv):	_	
Tessons 11-6 of 00-13	Very little co	ompa	risoru o	1 ever	and the second
	Overall Rating	 			
		1		3	4

Reviewed By:	
Title of Instructional Materials:	

Define, evaluate, and compare functions.	Summary and documentation of how the domain, cluster, and standa met. Cite examples from the materials.				
8.F.3 Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function $A = s^2$ giving the area of a square as a function of its side length	Important Mathematical Ideas	1	2	3	
is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.	Skills and Procedures	1	2	3	
	Mathematical Relationships	1	2	3	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E	1000 1000 ster, and st	andard that are		ot well
Jessons il-5 + il-7	Overall Rating	∢ 1	2	3	

Reviewed By:	
Title of Instructional Materials:	

Use functions to model relationships between quantities.	Summary and documentation of how the domain, cluster, and standard a met. Cite examples from the materials.				ard are
8.F.4 Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a	Important Mathematical Ideas	1	2	3	4
description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	Skills and Procedures	4 	2	3	4
	Mathematical Relationships	1	2	3	 → 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E		ructivo	Aunct	
11-3, 11-4, 11-5, 11-6	Portions of the domain, clu developed in the instructio	ster, and st	್ರ andard that are	· V	
1/2 Job 3-56					

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

Use functions to model relationships between quantities.	Summary and documentation met. Cite examples from the		ne domain, clus	ster, and stand	iard are
8.F.5	Important Mathematical Ideas		1		
Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	important watternatical ideas	1	2	3	4
	Skills and Procedures	← 1	2	3	
	Mathematical Relationships				
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / En	vidence,	2 ob Adoir	3 2scribiy	4 (
Jessons 11-2 + 11-6	Portions of the domain, clu developed in the instruction	ster, and sta	ndard that are		<u></u>
	Overall Rating	-	2	3	

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models,	Summary and documentati	on of how th	ne domain, clus	ter. and stand	ard are
transparencies, or geometry software.	met. Cite examples from the			ioi, and otam	
8.G.1a					
 Verify experimentally the properties of rotations, reflections, and translations: 	Important Mathematical Ideas	1	2	3	
 Lines are taken to lines, and line segments to line segments of the same length. 	Skills and Procedures				
	Okiils and Flocedules	1	2	3	4
	Mathematical Relationships	4-1			
		1	2	3	4
	Summary / Justification / E	vidence	, constant		
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Excellen+	activ	ities!		
1/1850ns 3-6, 3-7, 3-8	Portions of the domain, clu developed in the instruction			missing or no	t well
· · · · · · · · · · · · · · · · · · ·					
00-5					
	Overall Rating	1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials. transparencies, or geometry software. 8.G.1b Important Mathematical Ideas 1. Verify experimentally the properties of rotations, reflections, and translations: b. Angles are taken to angles of the same measure. Skills and Procedures Mathematical Relationships Summary / Justification / Evidence Easy for students to conclude experime Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well (Jessons 3-6, 3-7, 3-8 developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation met. Cite examples from the		•	ster, and stand	lard are
8.G.1c					
 Verify experimentally the properties of rotations, reflections, and translations: 	Important Mathematical Ideas	1	2	3	4
c. Parallel lines are taken to parallel lines.					
	Skills and Procedures	4			
		1	2	3	4
	Mathematical Relationships	4-1			
		1	2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Ex		ap with	Mic	
	Portions of the domain, cludedeveloped in the instruction			missing or no	t well
desoms 3-6, 3-7, 3-8	Not as deay	<u>(5</u> /1)	Majudi	+	
	line		raffes		
	Overall Rating	4 1			

Reviewed By:	
Title of Instructional Materials:	

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Understand congruence and similarity using physical models,	Summary and documentation		domain, clus	ster, and standa	ird are
transparencies, or geometry software.	met. Cite examples from the	e materials.			
8.G.2					
Understand that a two-dimensional figure is congruent to another if the	Important Mathematical Ideas	+			
second can be obtained from the first by a sequence of rotations, reflections,		1	2	3	4
and translations; given two congruent figures, describe a sequence that					
exhibits the congruence between them.					
	Skills and Procedures	4		1	
			2	3	4
		1	2	3	*
	Mathematical Relationships	4.1		,	
	Mathematical Relationships	4	1		-
		1	2	3	4
	Summan, / lundification / F.				
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clus	ster, and stand	lard that are	missing or not	well
desson 7-3 CC-5	developed in the instruction	nal materials (i	f any):		
C/633011 1- 5 CC-5	Needs more	OVDIAL	nation	15	
	Meds hor	explu	(00) 101		
	110/5001	onces			
	a sego				
	Overall Rating	4			
		1	2		4
		4	2	3	7

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
8.G.3					
Describe the effect of dilations, translations, rotations, and reflections on two- dimensional figures using coordinates.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	 	2	3	
	Mathematical Relationships	1		3	
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clu developed in the instruction			missing or ne	ot well
Lessons 3-6, 3-7, 3-8, 4-5					
	Overall Rating	 	1 2	3	

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentati met. Cite examples from the			ster, and stan	dard are
8.G.4					
Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	Important Mathematical Ideas	1	2	3	} 4
	Skills and Procedures	4 · 1 · · · · · · · · · · · · · · · · ·	2	3	4
	Mathematical Relationships	4 1	2	3	} 4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
dessons 4-4-4-5	Portions of the domain, clu developed in the instruction			missing or n	ot well
CC-3 4-4 Activity	Overall Rating	∢ 1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentati met. Cite examples from the		domain, clus	ster, and stand	ard are
8.G.5					
Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of	Important Mathematical Ideas	1	2	3	4
the three angles appears to form a line, and give an argument in terms of transversals why this is so.	Skills and Procedures	1	2	3	 → 4
	Mathematical Relationships	1	2		
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Ex 7-2a is an ex Outwelk angle	celler	t conn ements	ection + equa	Hons
dessons 4-4, 7-2,00-3	Portions of the domain, cludeveloped in the instruction	nal matoriale (if anyl.		
Activity Jab 7-5a	Overall Rating	← 1	2	1 3	 4

Reviewed By:	
Title of Instructional Materials:	

Understand and apply the Pythagorean Theorem.	Summary and documentation of h met. Cite examples from the mater	ow the domain, cluster, and standard are rials.
8.G.6 Explain a proof of the Pythagorean Theorem and its converse.	Important Mathematical Ideas ← I	2 3 4
	Skills and Procedures	1
	Mathematical Relationships	2 3 4
	Summary / Justification / Evidence	•
Indicate the chapter(s), section(s), and/or page(s) reviewed.		
3-2 + Activity Jab CC-6 Extension 3-3		ed standard that are missing or not well erials (if any): OFFOR OUT OF VLOJ-LIFE WAS
EATUISION JOU	Overall Rating	2 3 4

Reviewed By:	
Title of Instructional Materials:	

Understand and apply the Pythagorean Theorem.	Summary and documentation of how the domain, cluster, and standard a met. Cite examples from the materials.	are
8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	Important Mathematical Ideas 1 2 3	→ 4
	Skills and Procedures I 2 3	→ 4
	Mathematical Relationships 1 2 3	→ 4
	Summary / Justification / Evidence	
Indicate the chapter(s), section(s), and/or page(s) reviewed.		
Lesson 3-3 CC-6	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any): More Skill & Orill Hour all Hours	<u> </u>
	Overall Rating 1 1 3 4	

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Reviewed By:	
Title of Instructional Materials:	

Understand and apply the Pythagorean Theorem.	Summary and documentati met. Cite examples from the			ster, and stand	dard are
8.G.8	1		_		
Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	\	-		
		1	2	3	4
	Mathematical Relationships	1	2	3	 }
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clu developed in the instruction	nal materia	ls (if any):	•	3
	Distance &			+ An	
					3760
	Overall Rating	4	2	3	 ->

Reviewed By:	
Title of Instructional Materials.	

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	Summary and documentation met. Cite examples from the			ster, and stand	lard are
8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.					,
	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	4]			
		1	2	3	4
	Mathematical Relationships	1	2	 3	4
	Summary / Justification / Ev				
Indicate the chapter(s), section(s), and/or page(s) reviewed.	BAHANNAS)\0Y2	>		
Lessons 8-6, 8-7 8-8	Portions of the domain, cluded developed in the instruction	nal material	s (if any):	*	t well
	Vanilla ym bel f)100/21.			
	Overall Rating	1	2	1	

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.					
8.SP.1						
Construct and interpret scatter plots for bivariate measurement data to	Important Mathematical Ideas	{ 				
investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.		1	2	3	4	
	Skills and Procedures					
		1	2	3	4	
	Mathematical Relationships	4 				
		1	2	3	4	
	Summary / Justification / Ev	vidence				
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Good Activity Jaio					
Hecor 9.7 & Action	Portions of the domain, cluster, and standard that are missing of developed in the instructional materials (if any):					
Jesson 9-7 + Activity	lib- much. 2	ungho	reie en	Zina.	r	
CC-7	110- much emprosis on linear					
	Overall Rating					
		1	2	3	4	

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the	Important Mathematical Ideas	1	2	3	4
closeness of the data points to the line.	Skills and Procedures	(2	3	
	Mathematical Relationships	1	2	3	→ 4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
Lesson 9-7 CC-8	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):				
	No in-dept		oot gi		
	Overall Rating	1	$-\begin{pmatrix} 1 \\ 2 \end{pmatrix}$	3	4

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.					
8.SP.3	Important Mathematical Ideas			_		
Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is	important mathematical ideas	1	2	3	4	
esociated with an additional 1.5 cm in mature plant height.	Skills and Procedures	∢ 	2	3	 -∤- >	
	Mathematical Relationships	4-	2	3	 → 4	
	Summary / Justification / E	Evidence				
Indicate the chapter(s), section(s), and/or page(s) reviewed.						
00-8	Portions of the domain, cludeveloped in the instruction	e missing or n	ot well			
	Overall Rating	4-1	I			
		1	2	3	4	

CCC 1		,			
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Investigate patterns of association in bivariate data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.					
8.SP.4 Understand that patterns of association can also be seen in bivariate	Important Mathematical Ideas	4-1				
categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?	Skills and Procedures	1	2	3	4 	
	Mathematical Relationships	1	2	3		
	Summary / Justification / Ev	vidence				
Indicate the chapter(s), section(s), and/or page(s) reviewed.						
CC-9	Portions of the domain, cluster, and standard that are missing or not we developed in the instructional materials (if any):					
	Overall Rating	1	2	3		